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Workshop on Open Resilient human-aware Cyber-physical Systems
(WORCS-2012)

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Monday – June 25, 2012

Introduction
Mohamed Kaâniche (LAAS-CNRS, France), Michael Harrison (Queen Mary Univ. of London, UK), Herman Kopetz (Vienna Univ. of Technology, Austria), Daniel Siewiorek (Carnegie Mellon Univ.)

Session 1: Resilient Medical and Health Care Cyber-Physical Systems

Invited talk: "Challenges in Medical cyber-physical systems" ..................................................
Insup Lee, U. Pennsylvania, USA

Invited talk: "Virtual Coaches in Health Care" .................................................................
Daniel Siewiorek, Carnegie Mellon University, USA

Session 2: User Centric Approaches

Invited talk: "A model and simulation for user-centric automation devices and systems" .............
Jane Liu, Institute of Information Science, Academia Sinica, Taiwan

Smart checklists for human-intensive medical systems ............................................................
George Avrunin, Lori Clarke, Leon Osterweil, U. Massachusetts Amherst; Julian M. Goldman, Massachusetts General Hospital, Boston; Tracy Raush, DocBox, Waltham; MA, USA

Session 3: Design, Monitoring, Security

Toward resiliency in embedded monitoring systems" ............................................................
Homa Alemzadeh, Catello Di-Martino; UIUC, Zhanpeng Jin, Binghamton U., State U. New York, Zbigniew Kalbarczyk and Ravishankar Iyer, UIUC, USA

A rigorous approach to the design of cyber-physical Systems through co-simulation .................
John Fitzgerald, Ken Pierce, Carl Gamble, Newcastle U., UK

Physical attack protection with human-secure virtualization in data centers ..............................

MILS-related information flow control in the avionic domain: A view on security enhancing software architectures ........................................................................................................
Kevin Muller, Michael Paulitsch, EADS IW, Munich; Sergey Tverdyshev, Holger Basum, Sysgo AG, Klein-Winternheim; Germany.

Session 4: Panel and Workshop Wrap-up

Panel: "Challenges and research directions in resilient cyber-physical systems" ........................
Panelists: Insup Lee, U. Pennsylvania, USA; Jane Liu, Institute of Information Science, Academia Sinica, Taiwan; Keith Marzullo, NSF, USA; Takashi Nanya, Canon, Tokyo, Japan; Daniel Siewiorek, CMU, USA